

AOR AR5000A & AR5000A+3

2,000 memory channels, 40 search banks, 10 VFOs, 10 kHz - 3 GHz

The AR5000A provides amazing sensitivity and strong signal handing across an unprecedented wide frequency coverage with all mode receive tunable down to 1Hz steps... all this in a compact cabinet weighing just 3.5kg. No wonder this receiver has been adopted as the definitive receiver for professional operators, top-end hobbyists, government departments and armed forces throughout the world. The short wave performance is so good that separate receivers need not be considered.

Whether sitting on the desklop monitoring short wave transmissions or connected to aerial farms for wide band VHF-UHF monitoring (via the optional AS5000 4-way serial switch with automatic bandplan switching), operators have been astonished how the seemingly impossible has been achieved... unparalleled high performance, an amazingly flexible operating system, high build quality featuring a metal cabinet - yet still remaining very compact.

Multiple units have been interconnected at airports for communication monitoring, others have been ported via RS232 into dial-up or LAN monitoring applications. The receiver has even been combined with the optional spectrum display unit and located in distant concrete bunkers controlled via a taptop computer and dial-up connection. There is little competition for comparison, 'the rest of the pack' are significantly larger, heavier or many times more expensive!



☆ ☆ ☆ ☆ AR5000+3 awarded four starts by both the authoritative Passport To World Band Radio and World Radio & TV Handbook.

True base receivers are few and far between, some have simply evolved from the hand held equivalents with little tangels improvement in performance or facilities over their smaller counterparts (or use switched wide band converters) - the ARSODOA is not like this! AOR have been synonymous with pioneering receiver design from many years and this tradition continues with the AR5000A. A great advancement in wide band front end design has been made, partly due to the introduction of automatic electronic preselection between 500kHz - 999 999999MHz with low pass. hand pass and high pass fifters for other bands. The preselection may be "manually tracked" when monitoring spot frequencies to help reduce any potential effects of interference caused by nearby monster transmitters, this results in excellent strong signal handling yet maintains high sensitivity.

A TCXO forms the building block which is fitted as standard to ensure a very high degree of stability, provision is made to feed the AR5000A from an external 10 MHz reference signal should one be available (commercial organisations etc). A Numeric Controlled Oscillator (NCO) provides smooth tuning with steps right down to 1Hz. The receive circuitry is a triple conversion superheterodyne with I.F.s' of 622.0 / 622.4 MHz, 10.7 MHz. & 455kHz Multiple switchable I.F. bandwidths are available in both the 10.7MHz and 455kHz i.F. stages: 3kHz, 6kHz, 15kHz, 30kHz, 110kHz & 220kHz with provision for an optional 500Hz Collins mechanical filter, also a substitute 2.5kHz Collins mechanical SSB filter and Collins mechanical 5.5xHz narrow AM filter option is available.

The ARSOODA is housed in a stylish custom solid metal cabinet and is powered from the supplied external 12V d.o. power until but may be operated from any regulated supply or battery capable of providing 12:16V @ 1.0 Amps approx. Aerial input is via a high quality N-TYPE connector with a second SO239 connector which is switchable manually or automatically from the front panel. A switchable preamplifier is employed (below 230 MHz) plus a switchable 10dB attenuator, this may be configured as "auto" so that the receiver selects the optimum setting automatically

Not only is the RF performance outstanding, the microprocessor facilities also point to the forward and innovative thinking which forms the core of the success. There are 1,000 memory channels, 10 scan banks, 20 search banks with auto-memory store and a total of 2100 PASS frequencies, 5 independent VFOs, alpha-lag memory & search banks... TWICE, frequency offset, step adjust and auto-mode tuning and much more.

The 1,000 memory channels (10 banks x 100 channels), 20 search banks (TWICE) are stored by EEPROM so that no external supply, battery or capacitor is required for data retention.

Evolution in Action

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The original APSCOR provided frequency assurings to 2100MHz, the W weblet for increased range to 3090MAr (3GHz), also squeich esroralled sudio on ACCT for veice spanshel type recorders.

in addition EEPROM BANK SWITCHING means that all the momory channels, search banks, pass frequencies and VFOs are PROVIDED TWICE (making a total of 2,000 memory channels, 40 search banks, 10 VFOs etc). This is an ideal situation when more than one operator is to use the equipment, each have their own 'virtual' set. Scanning and search speed is a very respectable maximum of 45 channels or increments per second using "Cyber Scan" technology. A macringful & detalled auto-mode bandplan has been preprogrammed (specific to each market area) so that operation is straight forward and quide. Should you wish, auto-mode may be easily cancelled by selecting a different step size or mode. A special Frequency Offset facility plus step adjust has been provided to simplify DUPLEX frequency maniforing and for tracking unusual band plans. A wide variety of search and scan types are available including memory scan, select scan (your temporary favourile frequency notepadi), mode scan, bank scan, pause scan, search bank link etc with channel add facilities for changing memory contents. The squelch too may be configured for noise, signal level, audio level etc.

Audio low pass and high pass filters may be configured and are switchable around the following frequencies: LPF 3kHz, 4kHz, 6kHz & (2kHz, HPF 0.05kHz, 0.2kHz, 0.3kHz & 0.4kHz, De-emphasis to also selectable: THRU, 25u8, 50uS, 75uS 8 750u5. A DTMF decoder is provided to display DTMF characters in use with an optional CTCSS

board to display the CTCSS frequency.

A front panel accessory socket provides audio break-out / tetten for use with external signal processing utills, detector output and switching control for tape recorders. The AR5000A has a switchable 10 7MHz. LF, output ready to plug straight into the optional spectrum display unit for "real time" band occupancy evaluation and measurements in both frequency and dBm signal level, finding those elusive transmissions has never been so easy. Extensive facilities are evaluable via the RS232 port which is standard on the AR5000A. Even the volume and controls may be remotely controlled. Output terminals atprovided for an external speaker, headphones & transmit mute. Provision has been included for an optional built-in algorithing wellexternal genal syyiching unit piles CTCSS and other decoder options. A large fear fluminated segmented liquid crystal display provides a wealth of operating detail including frequency, mode, AGC, rec our also displays up to 8 alpha-numeric text characters so that comments may te entered to accompany memory channels & search banks to aid easy identification and retrieval of date. Two tuning centrols are provided. the main knot provides tuning steps from 1Hz to 999 999xHz and has mechanical variable torque adjustment ideal for fine tuning such as SSB applications, the second is click-indepted ideal for channel tuning and provides switchable step sizes of 100Hz, 1kHz, 10kHz, 100kHz. 1MHz and x10 for rapid tuning. An analogue 5-meter provides easy to see relative signal strengths. Other useful facilities include a built-in dual time clock 13hr/24hr with On/Off firmer, alway and silarm, variable beep type plus much much more! The English language operating manual comprises 77 A4 size pages with graphical key presses and lavishly illustrated LCD representations, a booklet containing the RS232 protocol listing is also supplied.

AR5000A+3 - Sync AM, AFC, NB

The "43" version offers even more with eynchronous AM (upper side band, lower side band and double side band with excellent lock range). AFC (Automatic Frequency Control for accurately tracking moving transmissions or unusual band plans) and Noise Blanker.

The SDU5600 is a new spectrum display unit ideally suited for locating and displaying those illusive transmissions.

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World Radio TV Handbook 18: Speeking of the AR\$300+3 in conclusion Compared with the ICDM ICR-8500 halfers considerably more resource, better throug-signal hamiling, wider coverage and darkfartly superior Warn



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